

## REMARKS

Applicants acknowledge receipt of an Office Action dated January 16, 2004. In this response, Applicants have amended claims 1, 5, 8, 14, 16, 22 and 26. In addition, Applicants have added claims 27-30. Support for these amendments may be found in the specification, *inter alia*, in the second full paragraph on page 1, the first full paragraph on page 5, the first full paragraph on page 16, the second full paragraph on page 17, the last full paragraph on page 27 as well as the paragraph bridging pages 27 and 28. Following entry of these amendments, claims 1-30 are pending in the application. Claims 2-4, 9-13, 17-20 and 23-25 have been withdrawn from consideration. Thus, claims 1, 5-8, 14-16, 21, 22 and 26-30 are pending and under consideration.

Upon allowance of the elected product claims, Applicants will be permitted to request rejoinder, in accordance with MPEP §821.04, of method claims 2-4, 9-13, 17-20 and 23-25.

Reconsideration is respectfully requested in view of the foregoing amendments and the remarks which follow.

### **Claim Rejections under 35 U.S.C. § 112**

On page 2 of the Office Action, the PTO has rejected claims 1, 5-8, 14-16, 21, 22, and 26 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph as allegedly being indefinite. While not acquiescing to the PTO's rejections, Applicants have amended claims 1, 5, 8, 14, 16 and 26 to expedite prosecution in the present Application.

In response to the PTO's question regarding claim 1, Applicants have amended the claim to recite "[a] ceramic member having a purity of 95 wt% or higher." In view of this amendment, Applicants submit that it is clear that the purity level recited in claim 1 refers to the purity level of the ceramic member.

In response to the PTO's questions regarding claim 5, Applicants have amended claim 5 to replace the term "ceramics" with "ceramic" and to recite that "large diameter portions of the pore are oriented in a depth direction."

With regard to the groupings in claims 8, 16 and 26, Applicants have amended each of these claims to recite proper alternative language.

With regard to the phrase "which seems as grains partially fall" in claim 14, Applicants have amended claim 14 to replace this phrase with the phrase "wherein the surface

layer comprises pores of a size on the order of the average grain size and oriented so that the pore is extended in the depth direction.”

With regard to the phrase “wherein a dense ceramics is made a base material,” Applicants have amended claim 14 to recite “[a] surface rugged ceramic member, comprising a dense ceramic base material.”

Finally, with regard to the phrase, “a surface layer thereof within 5 times of the average grain diameters contains no pulverized layers,” Applicants have amended claim 14 to recite “wherein a surface layer of the base material, within a depth of up to 5 times the average grain diameter, contains no pulverized layers.”

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections under §112. Applicants do not believe that the amendments as related to the §112, 2<sup>nd</sup> paragraph issues, have been narrowed.

With the §112 issues resolved, claims 14-16 and 26 (as well as new claim 27) are in condition for allowance, as no outstanding prior art rejections exist against independent claim 14 (and the present changes are not understood to affect allowability).

#### **Rejections under 35 U.S.C. §102**

On page 3 of the Office Action, the PTO has rejected claims 5-8, 21 and 22 under 35 U.S.C. §102(b) as being anticipated by U.S. patent 5,582,215 to Yamamoto *et al.* (hereafter “Yamamoto”). Applicants respectfully traverse this rejection to the extent that it may be applied to amended claims 5 and 8 for the reasons set forth below.

Yamamoto’s disclosure relates to a ceramic die used for cutting and shaping lead frames. Due to the nature of this application, Yamamoto’s die should be as smooth as possible. Given this specific use, Applicants submit that Yamamoto’s disclosure relates to a technology quite different from Applicants’ disclosure.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See generally MPEP §2131. Here, Yamamoto fails to disclose the presently claimed orientation of the pores. Specifically, Yamamoto fails to disclose a surface rugged ceramic member “wherein large diameter portions of the fine pores are oriented in a depth direction” as recited in independent claim 5. Claims 6-8, 21 and 22 ultimately depend from claim 5 and are believed to be allowable for the same reasons as claim 5.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection under §102.

### **Rejections Under 35 U.S.C. §103**

On page 3 of the Office Action, the PTO has rejected claims 1, 5, 6, 7 and 21 under 35 U.S.C. §103(a) as being unpatentable over JP 411057355A to Iwata (hereafter “Iwata”). Applicants respectfully traverse this rejection as set forth below.

Iwata’s disclosure relates to a ceramic filter with a grain diameter of from 300 to 400  $\mu\text{m}$ .

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA 1974). See MPEP §2143.03. Here, Iwata fails to teach or fairly suggest a ceramic member comprising “a crystal grain on the surface of the ceramic member [*which*] comprises a plurality of protrusions having a smaller diameter than that of the crystal grain” as recited independent claim 1. In addition, Iwata fails to teach or fairly suggest a surface rugged ceramic member “wherein large diameter portions of the fine pores are oriented in a depth direction” as recited in independent claim 5.

If an independent claim is nonobvious under §103, then any claim depending therefrom is nonobvious. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988). See MPEP 2143.03. Thus, Applicants submit that claims 6, 7 and 21, which depend ultimately depend from either independent claim 1 or independent claim 5, are also non-obvious.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections under §103.

It is noted that none of the amendments have been made in view of the prior art rejections.

### **Newly Added Claims**

In this response, Applicants have added claims 27-29 which depend, respectively, from independent claims 1, 5 and 14. With respect to claim 27, Applicants note that Yamamoto fails to disclose a vapor deposition apparatus comprising a ceramic member. With respect to claim 28, Applicants note that Iwata fails to teach or properly suggest a vapor deposition apparatus comprising a surface rugged ceramic member. With respect to claim 29,

Applicants note that the PTO did not reject claim 14, from which claim 29 depends, in view of any prior art.

With respect to newly added claim 30, Applicants note that neither Yamamoto nor Iwata, taken either individually or in combination, teach or suggest a ceramic member produced by a process comprising "forming a plurality of protrusions on a surface of the dense ceramic by precipitating fine crystals from a saturated solution of the reaction mixture formed by exposing the dense ceramic base material to an acid."

### CONCLUSION

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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